```
line 27, after "DYKD" insert --(SEQ ID NO: 2408)--;
        Page 12,
                       line 28, after "AAAGAP" insert --(SEQ ID NO: 2409)--;
                       line 30, delete "DYKDDDDDK" and insert --DYKDDDDK (SEQ ID NO:
2410)--.
                       line 1, after "sequences" insert -- (SEQ ID NOS 1-3, respectively)--;
        Page 13,
                       line 3, delete "sequence" and insert --sequences (SEQ ID NOS 4-6,
respectively)--;
                       line 5, after "sequences" insert -- (SEQ ID NOS 7-29, respectively)--;
                       line 7, after "sequences" insert -- (SEQ ID NOS 30-33, respectively)--;
                       line 9, after "sequences" insert -- (SEQ ID NOS 34 (design) & 35-98,
respectively)--;
                       line 10, after "contain" insert --(SEQ ID NO: 34)--;
                       line 12, after "sequences" insert --(SEQ ID NOS 34 (design) & 99-166,
respectively)--;
                       line 13, after "contain" insert -- (SEQ ID NO: 34)--;
                       line 15, after "sequences" insert --(SEQ ID NOS 167 (design) & 168-216,
respectively)--;
                       line 18, after "sequences" insert -(SEQ ID NOS 167 (design) & 217-244,
respectively)--;
                       line 21, after "sequences" insert -- (SEQ ID NOS 245 (design) & 246-305,
respectively)--;
                       line 24, after "sequences" insert -- (SEQ ID NOS 245 (design) & 306-342,
respectively)--;
                       line 27, after "sequences" insert -- (SEQ ID NOS 343 (design) & 344-430,
respectively)--;
                       line 28, after "sequence" insert -- (SEQ ID NO: 343)--.
                       line 1, after "sequences" insert -- (SEQ ID NOS 343 (design) & 431-467,
       Page 14,
respectively)--;
                       line 2, after "sequence" insert -- (SEQ ID NO: 343)--;
                       line 4, after "sequences" insert -- (SEQ ID NOS 468 (design) & 469-575,
respectively)--;
571947_1
                                                2
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line 5, after "sequence" insert --(SEQ ID NO: 468)--;
                        line 7, after "sequences" insert --(SEQ ID NOS 468 (design) & 576-657,
respectively)--;
                        line 8, after "sequence" insert -- (SEQ ID NO: 468)--;
                        line 10, after "sequences" insert -- (SEQ ID NOS 658-712, respectively)--;
                        line 12, after "sequences" insert --(SEQ ID NO: 713 )--;
                        line 14, after "sequences" insert -- (SEQ ID NOS 714-721, respectively)--;
                        line 16, after "sequences" insert -- (SEQ ID NOS 722-726, respectively)--;
                        line 18, after "sequences" insert -- (SEQ ID NOS 727-742, respectively)--;
                        line 20, after "sequences" insert -- (SEQ ID NOS 743-751, respectively)--;
                        line 22, after "sequences" insert -- (SEQ ID NOS 752 (design) & 753 -776,
respectively)--;
                        line 25, after "sequences" insert -- (SEQ ID NOS 752 (design) & 777-800,
respectively)--;
                        line 28, after "sequences" insert -- (SEQ ID NOS 801 (design) & 802-887,
respectively)--.
                        line 1, after "sequences" insert -- (SEQ ID NOS 801 (design) & 888-936,
        Page 15,
respectively)--;
                        line 4, after "sequences" insert -- (SEQ ID NOS 937 (design) & 938-1000,
respectively)--;
                        line 7, after "sequences" insert -- (SEQ ID NOS 1001 (design) & 1002-1029,
respectively)--;
                        line 10, after "sequences" insert -- (SEQ ID NOS 1030 (design) & 1031-1109,
respectively)--;
                        line 11, after "sequence" insert --(SEQ ID NO: 1030)--;
                        line 13, after "sequences" insert -- (SEQ ID NOS 1030 (design) & 1110-1201,
respectively)--;
                        line 14, after "sequence" insert --(SEQ ID NO: 1030)--;
                        line 16, after "sequences" insert -- (SEQ ID NOS 1202-1255, respectively)--;
                        line 19, after "sequences" insert --(SEQ ID NOS 1256-1301, respectively)--;
                        line 22, after "sequences" insert -- (SEQ ID NOS 1302 (design) & 1303-1432,
respectively)--;
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                                                  3
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line 23, after "sequence" insert --(SEQ ID NO: 1302)--;
                        line 25, after "sequences" insert -- (SEQ ID NOS 1433-1437, respectively)--;
                        line 27, after "sequences" insert -- (SEQ ID NO: 1438)--;
                        line 29, after "sequences" insert -- (SEQ ID NOS 1439 (design) & 1440-1458,
respectively)--;
                        line 30, after "sequence" insert --(SEQ ID NO: 1439)--.
                        line 1, after "sequences" insert -- (SEQ ID NOS 1439 (design) & 1459-1507,
        Page 16,
respectively)--;
                        line 2, after "sequence" insert -- (SEQ ID NO: 1439)--;
                        line 4, after "sequences" insert --(SEQ ID NO: 1508)--;
                        line 6, after "sequences" insert --(SEQ ID NOS 1509 (design) & 1510-1592,
respectively)--;
                        line 9, after "sequences" insert -- (SEQ ID NOS 1509 (design) & 1593-1607,
respectively)--;
                        line 12, after "sequences" insert -- (SEQ ID NOS 1608 (design) & 1609-1658,
respectively)--;
                        line 15, after "sequences" insert -- (SEQ ID NOS 1608 (design) & 1659-1722,
respectively)--;
                        line 17, after "sequences" insert -- (SEQ ID NOS 1608 (design) & 1723-1732,
respectively)--;
                        line 20, after "sequences" insert -- (SEQ ID NOS 1733-1735, respectively)--;
                        line 22, after "sequences" insert -- (SEQ ID NOS 1736 (design) & 1737-1774,
respectively)--;
                        line 25, after "sequences" insert -- (SEQ ID NOS 1736 (design) & 1775-1817,
respectively)--;
                        line 28, after "sequences" insert -- (SEQ ID NOS 1736 (design) & 1818-1866,
respectively)--;
                        line 1, after "sequences" insert --(SEQ ID NOS 1736 (design) & 1867 &
        Page 17,
1868, respectively)--;
                        line 3, after "sequences" insert -- (SEQ ID NOS 1869-1873, respectively)--;
                        line 4, after "sequences" insert -- (SEQ ID NOS 1874-1969, respectively)--;
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line 9, after "sequences" insert -- (SEQ ID NOS 1970 (design) & 1971-1983,
respectively)--;
                        line 12, after "sequences" insert -- (SEQ ID NOS 1984 (design) & 1985-1997,
respectively)--;
                        line 15, after "sequences" insert -- (SEQ ID NOS 1984 (design) & 1998-2005,
respectively)--;
                        line 18, after "sequences" insert -- (SEQ ID NOS 2006-2021, respectively)--;
                        line 20, after "sequences" insert -- (SEQ ID NOS 2022-2026, respectively)--;
                        line 22, after "sequences" insert -- (SEQ ID NOS 2027-2030, respectively)--;
                        line 24, after "sequences" insert -- (SEQ ID NOS 2031 & 2032, respectively)--;
                        line 26, after "sequences" insert -- (SEQ ID NOS 2033-2036, respectively)--;
                        line 28, after "sequences" insert -- (SEQ ID NOS 2037-2057, respectively)--.
                        line 1, after "sequences" insert -- (SEQ ID NOS 2058 (design) & 2059-2062,
        Page 18,
respectively)--;
                        line 4, after "sequences" insert --(SEQ ID NOS 2063 (design) & 2064-2086,
respectively)--;
                        line 7, after "sequences" insert -- (SEQ ID NOS 2063 (design) & 2087-2098,
respectively)--;
                        line 11, after "sequences" insert -- (SEQ ID NOS 2099-2124, respectively)--;
                        line 13, after "sequences" insert -- (SEQ ID NOS 2125-2174, respectively)--;
                        line 29, after "sequence" insert -- (SEQ ID NOS 2175-2192, respectively)--.
        Page 19,
                        line 1, after "sequences" insert -- (SEQ ID NOS 2193-2217, respectively)--;
                        line 8, after "sequences" insert -- (SEQ ID NOS 2218-2225, respectively)--;
                        line 23, after "sequences" insert -- (SEQ ID NOS 2226-2228, respectively)--.
        Page 20,
                        line 2, after "sequences" insert -- (SEQ ID NOS 2229-2231, respectively)--;
                        line 8, after "sequences" insert -- (SEQ ID NOS 2232-2236, respectively)--;
                        line 11, after "sequences" insert -- (SEQ ID NOS 2237-2305, respectively)--;
                        line 29, after "sequences" insert -- (SEQ ID NOS 2306-2321, respectively)--;
                        line 20, after "sequences" insert -- (SEQ ID NOS 2322-2341, respectively)--;
                        line 22, after "sequence" insert -- (SEQ ID NOS 2342 & 2343, respectively)--;
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line 25, after "sequence" insert --(SEQ ID NOS 2344 & 2345, respectively)--; line 28, after "sequence" insert --(SEQ ID NOS 2346 & 2347, respectively)--.
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- Page 21, line 1, after "sequence" insert --(SEQ ID NOS 2348 & 2349, respectively)--; line 4, after "sequence" insert --(SEQ ID NOS 2350 & 2351, respectively)--; line 7, after "sequence" insert --(SEQ ID NOS 2352 & 2353, respectively)--; line 26, after "sequence" insert --(SEQ ID NOS 2354-2376, respectively)--.
- Page 22, line 1, after "sequence" insert -- (SEQ ID NOS 2377-2393, respectively)--.
- Page 23, line 6, after "sequence" insert --(SEQ ID NOS 2394 & 2395, respectively)--; line 8, after "sequence" insert --(SEQ ID NOS 2396 & 2397, respectively)--; line 10, after "sequences" insert --(SEQ ID NOS 2398-2406, respectively)--. line 8, after "71B3:" insert --(SEQ ID NO: 2407)--.
- Page 27, line 30, after "are" insert --(SEQ ID NOS 2411 & 2412, respectively)--.
- Page 28, line 4, before "(D117; H2C)" insert --(SEQ ID NO: 2115)--; line 5, before "(S175)" insert --(SEQ ID NO: 2163)--; line 15, after "sequences" insert --(SEQ ID NOS 2416-2419, respectively)--; line 19, before "and" insert --(SEQ ID NO: 2419)--; after "below:" insert --(SEQ ID NO: 2420)--.
 - Page 30, line 30, after "is" insert --(SEQ ID NO: 2421)--.
 - Page 31, line 2, before "("F8")" insert --(SEQ ID NO: 1509)--; line 14, after "is" insert --(SEQ ID NO: 2422)--.
 - Page 32, line 3, after "is" insert --(SEQ ID NO: 2423)--; line 18, after "is" insert --(SEQ ID NO: 2424)--; line 30, after "WPTYW" insert --(SEQ ID NO: 2425)--.
- Page 33, line 8, before "The" insert --(SEQ ID NO: 1874)--; 571947_1 6

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line 18, after "10." insert -- (SEQ ID NO: 2426)--;
                 line 26, after "includes" insert -- (SEQ ID NO: 2427)--;
                 line 28, before "(E8)" insert --(SEQ ID NO: 2118)--;
                 line 28, after "and" insert -- (SEQ ID NO: 2119)--.
Page 37,
                 line 4, after "IR" insert -- (SEQ ID NO: 214)--;
                 line 5, after "IGFR" insert --(SEQ ID NO: 432)--;
                 line 6, after "IGFR" insert --(SEQ ID NO 433)--;
                 line 7, after "IR" insert -- (SEQ ID NO: 215)--;
                 line 8, after "IR" insert -- (SEQ ID NO: 216)--;
                 line 9, after "IGFR" insert -- (SEQ ID NO: 434) --;
                 line 10, after "IGFR" insert -- (SEQ ID NO: 435)--;
                 line 11, after "IGFR" insert --(SEQ ID NO: 436)--;
                 line 12, after "IGFR" insert -- (SEQ ID NO: 437)--;
                 line 13, after "IGFR" insert -- (SEQ ID NO: 438)--;
                 line 14, after "IGFR" insert --(SEQ ID NO: 439)--;
                 line 15, after "IGFR" insert -- (SEQ ID NO: 440)--;
                 line 16, after "IGFR" insert -- (SEQ ID NO: 441)--;
                 line 17, after "IGFR" insert -- (SEQ ID NO: 442)--;
                 line 18, after "IR" insert -- (SEQ ID NO: 278)--;
                line 19, after "IGFR" insert -- (SEQ ID NO: 443)--;
                line 20, after "IGFR" insert -- (SEQ ID NO: 444)--;
                line 21, after "IGFR" insert --(SEQ ID NO: 445)--;
                line 22, after "IGFR" insert -- (SEQ ID NO: 446)--;
                line 23, after "IGFR" insert --(SEQ ID NO: 447)--;
                line 24, after "IGFR" insert --(SEQ ID NO: 448)--;
                line 25, after "IGFR" insert --(SEQ ID NO: 449)--;
                line 26, after "IGFR" insert --(SEQ ID NO: 450)--;
                line 27, after "IGFR" insert --(SEQ ID NO: 451)--.
Page 38,
                line 2, after "IGFR" insert -- (SEQ ID NO: 452)--;
                line 3, after "IR" insert -- (SEQ ID NO: 277)--;
```

line 11, before "(Formula 9, JBA5)." insert --(SEQ ID NO: 2152)--;

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line 4, after "IR" insert --(SEQ ID NO: 710)--;
                 line 5, after "IGFR" insert -- (SEQ ID NO: 456)--;
                 line 6, after "IGFR" insert -- (SEQ ID NO: 457)--;
                 line 7, after "IGFR" insert -- (SEQ ID NO: 458)--;
                 line 8, after "IR" insert -- (SEQ ID NO: 96)--;
                 line 9, after "IR" insert -- (SEQ ID NO: 97)--;
                 line 10, after "IR" insert -- (SEQ ID NO: 98)--;
                line 11, after "IGFR" insert -- (SEQ ID NO: 464)--;
                line 12, after "IGFR" insert --(SEQ ID NO: 466)--;
                line 13, after "IGFR" insert --(SEQ ID NO: 2428)--;
                line 14, after "IGFR" insert -- (SEQ ID NO: 2147)--;
Page 39,
                line 4, after "IGFR" insert -- (SEQ ID NO: 743)--;
                line 5, after "IGFR" insert -- (SEQ ID NO: 744)--;
                line 6, after "IR" insert -- (SEQ ID NO: 834)--;
                line 7, after "IR" insert -- (SEQ ID NO: 726)--;
                line 8, after "IGFR" insert -- (SEQ ID NO: 1256)--;
                line 9, after "IR" insert -- (SEQ ID NO: 724)--;
                line 10, after "IR" insert -- (SEQ ID NO: 1255)--;
                line 11, after "IR" insert -- (SEQ ID NO: 1432)--;
                line 12, after "IGFR" insert --(SEQ ID NO: 1257)--;
                line 13, after "IR" insert --(SEQ ID NO: 833)--;
                line 14, after "IGFR" insert --(SEQ ID NO: 1111)--;
                line 15, after "IR" insert -- (SEQ ID NO: 832)--;
                line 16, after "IGFR" insert --(SEQ ID NO: 745)--;
                line 17, after "IGFR" insert --(SEQ ID NO: 1258)--;
                line 18, after "IGFR" insert -- (SEQ ID NO: 1259)--;
                line 19, after "IGFR" insert -- (SEQ ID NO: 746)--;
                line 20, after "IGFR" insert -- (SEQ ID NO: 1260)--;
                line 21, after "IR" insert -- (SEQ ID NO: 723)--;
                line 22, after "IGFR" insert -- (SEQ ID NO: 1261)--;
                line 23, after "IR" insert -- (SEQ ID NO: 831)--;
                line 24, after "IGFR" insert --(SEQ ID NO: 1262)--;
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line 26, after "IGFR" insert -- (SEQ ID NO: 1264)--;
                line 27, after "IR" insert -- (SEQ ID NO: 828)--;
                line 28, after "IR" insert -- (SEQ ID NO: 722)--;
                line 29, after "IGFR" insert -- (SEQ ID NO: 1265)--.
Page 40,
                line 3, after "IGFR" insert -- (SEQ ID NO: 1266)--;
                line 4, after "IGFR" insert -- (SEQ ID NO: 1267)--;
                line 5, after "IGFR" insert -- (SEQ ID NO: 1268)--;
                line 6, after "IGFR" insert -- (SEQ ID NO: 1269)--;
                line 7, after "IGFR" insert -- (SEQ ID NO: 1270)--;
                line 8, after "IGFR" insert -- (SEQ ID NO: 1271)--;
                line 9, after "IGFR" insert -- (SEQ ID NO: 1272)--;
                line 10, after "IGFR" insert -- (SEQ ID NO: 747)--;
                line 11, after "IGFR" insert -- (SEQ ID NO: 1273)--:
               line 12, after "IGFR" insert --(SEQ ID NO: 1274)--;
               line 13, after "IGFR" insert -- (SEQ ID NO: 1275)--;
               line 14, after "IGFR" insert -- (SEQ ID NO: 1276)--;
               line 15, after "IGFR" insert -- (SEQ ID NO: 1277)--;
               line 16, after "IGFR" insert -- (SEQ ID NO: 1278)--;
               line 17, after "IR" insert -- (SEQ ID NO: 1431)--;
               line 18, after "IGFR" insert -- (SEQ ID NO: 1279)--;
               line 19, after "IGFR" insert -- (SEQ ID NO: 1280)--;
               line 20, after "IR" insert -- (SEQ ID NO: 825)--;
               line 21, after "IGFR" insert --(SEQ ID NO: 1281)--;
               line 22, after "IGFR" insert -- (SEQ ID NO: 1282)--;
               line 23, after "IGFR" insert --(SEQ ID NO: 748)--;
               line 24, after "IR" insert -- (SEQ ID NO: 1429)--;
              line 25, after "IGFR" insert -- (SEQ ID NO: 1284)--;
              line 26, after "IGFR" insert -- (SEQ ID NO: 1286)--;
              line 27, after "IR" insert -- (SEQ ID NO: 824)--;
              line 28, after "IGFR" insert -- (SEQ ID NO: 1115)--;
              line 29, after "IGFR" insert -- (SEQ ID NO: 1287)--;
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line 25, after "IGFR" insert -- (SEQ ID NO: 1263)--;

line 30, after "IR" insert -- (SEQ ID NO: 1430)--.

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line 3, after "IR" insert -- (SEQ ID NO: 823)--;
Page 41,
                 line 4, after "IR" insert --(SEQ ID NO: 822)--;
                 line 5, after "IR" insert --(SEQ ID NO: 821)--;
                 line 6, after "IR" insert -- (SEQ ID NO: 820)--;
                 line 7, after "IR" insert -- (SEQ ID NO: 819)--;
                 line 8, after "IGFR" insert -- (SEQ ID NO: 1124)--;
                 line 9, after "IGFR" insert -- (SEQ ID NO: 1125)--;
                 line 10, after "IR" insert -- (SEQ ID NO: 818)--;
                 line 11, after "IR" insert -- (SEQ ID NO: 775)--;
                 line 12, after "IR" insert -- (SEQ ID NO: 814)--;
                 line 13, after "IR" insert -- (SEQ ID NO: 813)--;
                 line 14, after "IR" insert -- (SEQ ID NO: 811)--;
                 line 15, after "IR" insert -- (SEQ ID NO: 808)--;
                 line 16, after "IR" insert -- (SEQ ID NO: 809)--;
                 line 17, after "IGFR" insert -- (SEQ ID NO: 1142)--;
                 line 18, after "IR" insert -- (SEQ ID NO: 1253)--;
                 line 19, after "IR" insert --(SEQ ID NO: 805)--;
                 line 20, after "IGFR" insert -- (SEQ ID NO: 1066)--;
                 line 21, after "IR" insert -- (SEQ ID NO: 768)--;
                 line 22, after "IR" insert -- (SEQ ID NO: 804)--;
                 line 23, after "IR" insert -- (SEQ ID NO: 763)--;
                 line 24, after "IR" insert -- (SEQ ID NO: 764)--;
                 line 25, after "IGFR" insert --(SEQ ID NO: 1186)--;
                 line 26, after "IGFR" insert --(SEQ ID NO: 2429)--;
                 line 27, after "(RP10)" insert --(SEQ ID NO: 2148)--.
                 line 4, after "IR" insert --(SEQ ID NO: 2024)--;
Page 42,
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Page 42, line 4, after "IR" insert --(SEQ ID NO: 2024)--; line 5, after "IGFR" insert --(SEQ ID NO: 2053)--; line 6, after "IGFR" insert --(SEQ ID NO: 2054)--; line 7, after "IGFR" insert --(SEQ ID NO: 2055)--; line 8, after "IR" insert --(SEQ ID NO: 2024)--.

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line 2, after "(FYxWF)" insert --(SEQ ID NO: 2415)--;
Page 44,
                line 4, after "G3" insert -- (SEQ ID NO: 2108)--;
                line 5, after "H2" insert -- (SEQ ID NO: 2430)--;
                line 6, after "H2C" insert -- (SEQ ID NO: 2115)--;
                line 7, after "E12" insert -- (SEQ ID NO: 35)--;
                line 8, after "G1" insert -- (SEQ ID NO: 91)--;
                line 9, after "B12" insert -- (SEQ ID NO: 2167)--;
                line 10, after "B11" insert -- (SEQ ID NO: 658)--;
                line 11, after "F6" insert -- (SEQ ID NO: 660)--;
                line 12, after "IR~" insert --(SEQ ID NO: 246)--;
                line 13, after "IR" insert -- (SEQ ID NO: 345)--;
                line 14, after "D2" insert --(SEQ ID NO: 471)--;
                line 15, after "D12" insert -- (SEQ ID NO: 472)--;
                line 16, after "G3" insert -- (SEQ ID NO: 473)--;
                line 17, after "E8*" insert --(SEQ ID NO: 560)--;
                line 18, after "IR~" insert --(SEQ ID NO:474)--;
                line 19, after "C1" insert --(SEQ ID NO: 36)--;
                line 20, after "B6-like" insert -- (SEQ ID NO: 2416)--;
                line 22, after "20C11" insert -- (SEQ ID NO: 2117)--;
                line 23, after "20E2" insert -- (SEQ ID NO: 2116)--;
                line 24, after "C7" insert -- (SEQ ID NO: 2165)--;
                line 25, after "C10" insert --(SEQ ID NO: 2166)--;
                line 26, after "IR" insert -- (SEQ ID NO: 1203)--;
                line 27, after "E3*" insert --(SEQ ID NO: 659)--;
                line 28, after "F9" insert --(SEQ ID NO: 1032)--;
                line 29, after "HOLO*" insert --(SEQ ID NO: 1303)--;
                line 30, after "HOLO*" insert -- (SEQ ID NO: 1304)--;
                line 31, after "E2" insert --(SEQ ID NO: 1033)--;
                line 32, after "IR*" insert --(SEQ ID NO: 1305)--;
                line 33, after "IR" insert --(SEQ ID NO: 1204)--;
                line 34, after "E12" insert -- (SEQ ID NO: 1247)--;
                line 35, after "B6" insert -- (SEQ ID NO: 1034)--;
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line36, after "B6-like" insert -- (SEQ ID NO: 2441)--;
                line 38, after "A12" insert -- (SEQ ID NO: 1441)--;
                line 39, after "F9" insert --(SEQ ID NO: 1433)--;
                line 40, after "IR" insert --(SEQ ID NO: 1440)--;
                line 41, after "IR" insert -- (SEQ ID NO: 661)--;
                line 42, after "E6" insert -- (SEQ ID NO: 1442)--;
                line 43, after "IR" insert -- (SEQ ID NO: 1444)--;
                line 44, after "Group 6" insert -- (SEQ ID NO: 2442)--;
                line 46, after "IR" insert -- (SEQ ID NO: 2022)--;
                line 49, after "IR~" insert --(SEQ ID NO: 2144)--;
                line 50, after "IR~" insert --(SEQ ID NO: 2149)--;
                line 51, after "IR~" insert --(SEQ ID NO: 2145)--;
                line 52, after "IR~" insert --(SEQ ID NO: 2150)--.
                line 4, after "F8" insert --(SEQ ID NO: 1508)--;
Page 45,
                line 5, after "C12" insert --(SEQ ID NO: 2061)--;
                line 6, after "Des2" insert --(SEQ ID NO: 2169)--;
                line 7, after "F12" insert -- (SEQ ID NO: 1567)--;
                line 8, after "B9" insert --(SEQ ID NO: 1514)--;
                line 9, after "B12" insert --(SEQ ID NO: 1732)--;
                line 10, after "2B3" insert --(SEQ ID NO: 2086)--;
                line 11, after "2F9~" insert --(SEQ ID NO: 2098)--;
                line 12, after "4H4~" insert --(SEQ ID NO: 2065)--;
                line 15, after "D8" insert -- (SEQ ID NO: 2127)--;
                line 16, after "G1" insert -- (SEQ ID NO: 2170)--;
                line 17, after "B5~" insert --(SEQ ID NO: 2431)--;
                line 18, after "A7" insert --(SEQ ID NO: 1765)--;
                line 19, after "F1~" insert --(SEQ ID NO: 1806)--;
                line 22, after "F10" insert -- (SEQ ID NO: 1842)--;
                line 23, after "B12~" insert --(SEQ ID NO: 1732)--;
                line 24, after "A9" insert --(SEQ ID NO: 2432)--.
Page 49,
                line 24, after "epitope" insert -- (SEQ ID NO: 2410)--;
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line 25, after "epitope" insert --(SEQ ID NO: 2408)--.

- Page 51, line 26, after "and" insert --(SEQ ID NO: 2410)--.
- Page 56, line 16, after "are:" insert --(SEQ ID NO: 2115)--; line 17, before "(D118, 20E2)" insert --(SEQ ID NO: 2116)--; line 18, before "(D119,20C11)" insert --(SEQ ID NO: 2117)--; line 19, before "(D116, JBA5)" insert --(SEQ ID NO: 2114)--; line 20, before "(D113, H2)" insert --(SEQ ID NO: 2111)--; line 21, before "(S175)" insert --(SEQ ID NO: 2163)--; line 22, before "(D117, H2C)" insert --(SEQ ID NO: 2163)--; line 23, after "is" insert --(SEQ ID NO: 2163)--.
- Page 62, line 7, after "sequence" insert --(SEQ ID NO: 2433)--.
- Page 66, line 31, after "sequence" insert --(SEQ ID NO: 2434)--.
- Page 67, line 2, after "consensus" insert --(SEQ ID NO: 2435)--.
- Page 68, line 26, after "consensus" insert --(SEQ ID NO: 2435)--.
- Page 69, line 4, after "sequence" insert --(SEQ ID NO: 2435)--; line 15, before "was" insert --(SEQ ID NO: 2436)--.
- Page 70, line 11, after "is:" insert --(SEQ ID NO: 2437)--.
- Page 71, line 16, after "sequence" insert --(SEQ ID NO: 2435)--.
- Page 82, line 12, after "as" insert--(SEQ ID NO: 2438)--.
- Page 85, line 4, after "A6 CORE" insert --(SEQ ID NO: 2439)--.

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line 14, after "Parental" insert -- SEQ ID NO: 2440)--.
Page 86,
                line 28, after "the" insert -- (SEQ ID NO: 2415)--;
Page 91,
                line 29, after "of" insert -- (SEQ ID NO: 2110)--;
                line 30, after "the" insert -- (SEQ ID NO: 2416)--;
                line 31, after "of" insert -- (SEQ ID NO: 2443)--.
                line 20, after "is:" insert -- (SEQ ID NO: 2444)--;
Page 100,
                line 21, after "is:" insert --(SEQ ID NO: 2445)--.
                line 3, after "D101" insert --(SEQ ID NO: 2099)--;
Page 114,
                line 4, after "D102" insert --(SEQ ID NO: 2100)--;
                line 5, after "D103" insert --(SEQ ID NO: 2101)--;
                line 6, after "D104" insert -- (SEQ ID NO: 2102)--;
                line 7, after "D105" insert --(SEQ ID NO: 2103)--;
                line 8, after "D106" insert --(SEQ ID NO: 2104)--;
                line 9, after "D107" insert --(SEQ ID NO: 2105)--;
                line 10, after "D108" insert --(SEQ ID NO: 2106)--;
                line 11, after "D109" insert --(SEQ ID NO: 2107)--;
                line 12, after "D110" insert --(SEQ ID NO: 2108)--;
                line 13, after "D111" insert --(SEQ ID NO: 2109)--;
                line 14, after "D112" insert --(SEQ ID NO: 2110)--;
                line 15, after "D113" insert --(SEQ ID NO: 2111)--;
                line 16, after "D114" insert -- (SEQ ID NO: 2112)--;
                line 17, after "D115" insert --(SEQ ID NO: 2113)--;
                line 18, after "D116" insert --(SEQ ID NO: 2114)--;
                line 19, after "D117" insert --(SEQ ID NO: 2115)--;
                line 20, after "D117K" insert --(SEQ ID NO: 2446)--;
                line 21, after "D118" insert --(SEQ ID NO: 2116)--;
                line 22 ,after "D119" insert --(SEQ ID NO: 2117)--;
                line 23, after "D120" insert --(SEQ ID NO: 2118)--;
                line 24, after "D121" insert --(SEQ ID NO: 2119)--;
                line 25, after "D122" insert --(SEQ ID NO: 2120)--;
```

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line 26, after "D123" insert --(SEQ ID NO: 2121)--;
                line 27, after "D124" insert --(SEQ ID NO: 2122)--;
               line 28, after "D101A" insert --(SEQ ID NO: 2099)--;
               line 29, after "D102A" insert --(SEQ ID NO: 2100)--;
                line 30, after "D112A" insert --(SEQ ID NO: 2110)--;
                line 31, after "D113A" insert -- (SEQ ID NO: 2111)--;
                line 32, after "D117A" insert --(SEQ ID NO: 2115)--;
                line 33, after "D119A" insert --(SEQ ID NO: 2117)--;
                line 34, after "D122A" insert --(SEQ ID NO: 2120)--;
                line 35, after "D123A" insert --(SEQ ID NO: 2121)--;
                line 36, after "D124A" insert --(SEQ ID NO: 2122)--.
Page 119-122, Table 15, after "S105" insert --(SEQ ID NO: 2447)--;
                Table 15, after "S106" insert -- (SEQ ID NO:2448 )--;
                Table 15, after "S107" insert -- (SEQ ID NO: 2449)--;
                Table 15, after "S108" insert -- (SEQ ID NO: 2450)--;
                Table 15, after "S109" insert -- (SEQ ID NO: 2451)--;
               Table 15, after "S110" insert -- (SEQ ID NO: 2452)--;
                Table 15, after "S111" insert --(SEQ ID NO: 2453)--;
                Table 15, after "S112" insert --(SEQ ID NO: 2454)--;
                Table 15, after "S113" insert -- (SEQ ID NO: 2455)--;
               Table 15, after "S114" insert --(SEQ ID NO: 2456)--;
               Table 15, after "S115" insert -- (SEQ ID NO: 2457)--;
               Table 15, after "S116" insert --(SEQ ID NO: 2458)--;
               Table 15, after "S117" insert --(SEQ ID NO: 2459)--;
               Table 15, after "S118" insert --(SEQ ID NO: 2460)--;
                Table 15, after "S119" insert --(SEQ ID NO: 2461)--;
                Table 15, after "S120" insert -- (SEQ ID NO: 2462)--;
                Table 15, after "S121" insert --(SEQ ID NO: 2463)--;
               Table 15, after "S122" insert --(SEQ ID NO: 2464)--;
                Table 15, after "S123" insert -- (SEQ ID NO: 2465)--;
                Table 15, after "S124" insert --(SEQ ID NO: 2466)--;
                Table 15, after "S125" insert --(SEQ ID NO: 2467)--;
```

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Table 15, after "S126" insert -- (SEQ ID NO: 2468)--;
Table 15, after "S127" insert -- (SEQ ID NO: 2469)--;
Table 15, after "S128" insert -- (SEQ ID NO: 2470)--;
Table 15, after "S129" insert -- (SEQ ID NO: 2471)--;
Table 15, after "S131" insert --(SEQ ID NO: 2472)--;
Table 15, after "S137" insert -- (SEQ ID NO: 2473)--;
Table 15, after "S145" insert -- (SEQ ID NO: 2474)--;
Table 15, after "S147" insert --(SEQ ID NO: 2475)--;
Table 15, after "S148" insert -- (SEQ ID NO: 2476)--;
Table 15, after "S149" insert -- (SEQ ID NO: 2477)--;
Table 15, after "S150" insert -- (SEQ ID NO: 2478)--;
Table 15, after "S152" insert --(SEQ ID NO: 2479)--;
Table 15, after "S153" insert --(SEQ ID NO: 2480)--;
Table 15, after "S154" insert -- (SEQ ID NO: 2481)--;
Table 15, after "S155" insert -- (SEQ ID NO: 2482)--;
Table 15, after "S156" insert --(SEQ ID NO: 2483)--;
Table 15, after "S157" insert -- (SEQ ID NO: 2484)--;
Table 15, after "S158" insert --(SEQ ID NO: 2485)--;
Table 15, after "S159" insert -- (SEQ ID NO: 2486)--;
Table 15, after "S160" insert -- (SEQ ID NO: 2487)--;
Table 15, after "S161" insert -- (SEQ ID NO: 2488)--;
Table 15, after "S162" insert -- (SEQ ID NO: 2489)--;
Table 15, after "S165" insert --(SEQ ID NO: 2490)--;
Table 15, after "S166" insert -- (SEQ ID NO: 2491)--;
Table 15, after "S167" insert -- (SEQ ID NO: 2160)--;
Table 15, after "S168" insert -- (SEQ ID NO: 2492)--;
Table 15, after "S169" insert -- (SEQ ID NO: 2493)--;
Table 15, after "S170" insert -- (SEQ ID NO: 2494)--;
Table 15, after "S171" insert --(SEQ ID NO: 2495)--;
Table 15, after "S172" insert -- (SEQ ID NO: 2496)--;
Table 15, after "S173" insert --(SEQ ID NO: 2161)--;
Table 15, after "S174" insert -- (SEQ ID NO: 2162)--;
Table 15, after "S175" insert -- (SEQ ID NO: 2163)--;
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Table 15, after "S176" insert --(SEQ ID NO: 2164)--;
Table 15, after "S177" insert -- (SEQ ID NO: 2165)--;
Table 15, after "S178" insert -- (SEQ ID NO: 2166)--;
Table 15, after "S179" insert -- (SEQ ID NO: 2167)--;
Table 15, after "S180" insert -- (SEQ ID NO: 2497)--;
Table 15, after "S181" insert -- (SEQ ID NO: 2498)--;
Table 15, after "S182" insert -- (SEQ ID NO: 2499)--;
Table 15, after "S183" insert -- (SEQ ID NO: 2500)--;
Table 15, after "S184" insert -- (SEQ ID NO: 2501)--;
Table 15, after "S203" insert --(SEQ ID NO: 2502)--;
Table 15, after "S204" insert --(SEQ ID NO: 2503)--;
Table 15, after "$205" insert --($EQ ID NO: 2504)--;
Table 15, after "S206" insert --(SEQ ID NO: 2505)--;
Table 15, after "S207" insert --(SEQ ID NO: 2506)--;
Table 15, after "S208" insert -- (SEQ ID NO: 2507)--;
Table 15, after "S209" insert -- (SEQ ID NO: 2508)--;
Table 15, after "S210" insert -- (SEQ ID NO: 2509)--;
Table 15, after "S211" insert -- (SEQ ID NO: 2510)--;
Table 15, after "S212" insert -- (SEQ ID NO: 2511)--;
Table 15, after "S213" insert -- (SEQ ID NO: 2512)--;
Table 15, after "S214" insert -- (SEQ ID NO: 2513)--;
Table 15, after "S215" insert --(SEQ ID NO: 2514)--;
Table 15, after "S216" insert -- (SEQ ID NO: 2515)--;
Table 15, after "S217" insert --(SEQ ID NO: 2516)--;
Table 15, after "S218" insert -- (SEQ ID NO: 2517)--;
Table 15, after "S219" insert -- (SEQ ID NO: 2518)--;
Table 15, after "S220" insert --(SEQ ID NO: 2519)--;
Table 15, after "S221" insert -- (SEQ ID NO: 2520)--;
Table 15, after "S222" insert --(SEQ ID NO: 2521)--;
Table 15, after "S223" insert --(SEQ ID NO: 2522)--;
Table 15, after "S224" insert --(SEQ ID NO: 2523)--;
Table 15, after "S225" insert --(SEQ ID NO: 2524)--;
Table 15, after "S226" insert -- (SEQ ID NO: 2525)--;
```

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Table 15, after "S227" insert --(SEQ ID NO: 2526)--;
Table 15, after "S228" insert -- (SEQ ID NO: 2527)--;
Table 15, after "S229" insert -- (SEQ ID NO: 2528)--;
Table 15, after "S230" insert --(SEQ ID NO: 2529)--;
Table 15, after "S231" insert --(SEQ ID NO: 2530)--;
Table 15, after "S232" insert --(SEQ ID NO: 2531)--;
Table 15, after "S233" insert --(SEQ ID NO: 2532)--;
Table 15, after "S234" insert --(SEQ ID NO: 2533)--;
Table 15, after "S235" insert --(SEQ ID NO: 2534)--;
Table 15, after "S236" insert -- (SEQ ID NO: 2535)--;
Table 15, after "S237" insert --(SEQ ID NO: 2536)--;
Table 15, after "S238" insert -- (SEQ ID NO: 2537)--;
Table 15, after "S239" insert --(SEQ ID NO: 2538)--;
Table 15, after "S240" insert --(SEQ ID NO: 2539)--;
Table 15, after "S241" insert --(SEQ ID NO: 2540)--;
Table 15, after "S242" insert --(SEQ ID NO: 2541)--;
Table 15, after "S243" insert --(SEQ ID NO: 2542)--;
Table 15, after "S244" insert --(SEQ ID NO: 2543)--;
Table 15, after "S245" insert --(SEQ ID NO: 2544)--;
Table 15, after "S246" insert --(SEQ ID NO: 2545)--;
Table 15, after "S247" insert -- (SEQ ID NO: 2546)--;
Table 15, after "S248" insert --(SEQ ID NO: 2547)--;
Table 15, after "S249" insert -- (SEQ ID NO: 2548)--;
Table 15, after "S250" insert --(SEQ ID NO: 2549)--;
Table 15, after "S251" insert -- (SEQ ID NO: 2550)--;
Table 15, after "S252" insert --(SEQ ID NO: 2551)--;
Table 15, after "S253" insert -- (SEQ ID NO: 2552)--;
Table 15, after "S254" insert --(SEQ ID NO: 2553)--;
Table 15, after "S255" insert --(SEQ ID NO: 2554)--;
Table 15, after "S256" insert -- (SEQ ID NO: 2555)--;
Table 15, after "S257" insert --(SEQ ID NO: 2172)--;
Table 15, after "S258" insert -- (SEQ ID NO: 2173)--;
Table 15, after "S259" insert -- (SEQ ID NO: 2174)--;
```

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Table 15, after "$260" insert -- (SEQ ID NO: 2556)--;
 Table 15, after "S261" insert -- (SEQ ID NO: 2557)--;
 Table 15, after "S262" insert -- (SEQ ID NO: 2558)--;
 Table 15, after "S263" insert --(SEQ ID NO: 2559)--;
 Table 15, after "S264" insert -- (SEQ ID NO: 2171)--;
 Table 15, after "$265" insert --($EQ ID NO: 2560)--;
 Table 15, after "S266" insert -- (SEQ ID NO: 2561)--;
 Table 15, after "S267" insert -- (SEQ ID NO: 2562)--;
 Table 15, after "$268" insert -- (SEQ ID NO: 2563)--;
 Table 15, after "S273" insert --(SEQ ID NO: 2564)--;
 Table 15, after "S274" insert -- (SEQ ID NO: 2565)--;
 Table 15, after "S275" insert --(SEQ ID NO: 2566)--;
 Table 15, after "S276" insert -- (SEQ ID NO: 2567)--;
Table 15, after "S277" insert --(SEQ ID NO: 2568)--;
Table 15, after "S278" insert -- (SEQ ID NO: 246)--;
Table 15, after "S279" insert --(SEQ ID NO: 2569)--;
Table 15, after "S280" insert -- (SEQ ID NO: 2570)--;
Table 15, after "$281" insert --($EQ ID NO: 2571)--;
Table 15, after "S282" insert --(SEQ ID NO: 2572)--;
Table 15, after "S283" insert -- (SEQ ID NO: 2573)--;
Table 15, after "S284" insert --(SEQ ID NO: 2574)--;
Table 15, after "S285" insert -- (SEQ ID NO: 2575)--;
Table 15, after "S286" insert -- (SEQ ID NO: 2576)--;
Table 15, after "S287" insert -- (SEQ ID NO: 2577)--;
Table 15, after "S288" insert -- (SEQ ID NO: 2578)--;
Table 15, after "S289" insert -- (SEQ ID NO: 2579)--;
Table 15, after "S290" insert --(SEQ ID NO: 2580)--;
Table 15, after "S291" insert -- (SEQ ID NO: 2581)--;
Table 15, after "S292" insert -- (SEQ ID NO: 2582)--;
Table 15, after "S293" insert -- (SEQ ID NO: 2583)--;
Table 15, after "S294" insert -- (SEQ ID NO: 2584)--;
Table 15, after "S295" insert --(SEQ ID NO: 2585)--;
Table 15, after "S296" insert --(SEQ ID NO: 2586)--;
```

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Table 15, after "S297" insert --(SEQ ID NO: 2587)--;
                 Table 15, after "S298" insert -- (SEQ ID NO: 2588)--;
                 Table 15, after "S299" insert -- (SEQ ID NO: 2589)--;
                 Table 15, after "S300" insert --(SEQ ID NO: 2590)--;
                 Table 15, after "S301" insert -- (SEQ ID NO: 2591)--;
                 Table 15, after "S302" insert --(SEQ ID NO: 2592)--;
                 Table 15, after "S303" insert --(SEQ ID NO: 2593)--;
                 Table 15, after "S304" insert -- (SEQ ID NO: 2594)--;
                 Table 15, after "S305" insert -- (SEQ ID NO: 2595)--;
                 Table 15, after "S306" insert -- (SEQ ID NO: 2596)--.
Page 125,
                Table 16, after "IM445" insert --(SEQ ID NO: 2597)--;
                Table 16, after "IM447" insert --(SEQ ID NO: 2598)--;
                Table 16, after "IM460" insert --(SEQ ID NO: 2599)--;
                Table 16, after "IM453" insert --(SEQ ID NO: 2600)--;
                Table 16, after "IM466" insert -- (SEQ ID NO: 2601)--;
                Table 16, after "IM448" insert -- (SEQ ID NO: 2602)--;
                Table 16, after "IM446" insert -- (SEQ ID NO: 2603)--;
                Table 16, after "IM455" insert --(SEQ ID NO: 2604)--;
                Table 16, after "IM465" insert -- (SEQ ID NO: 2605)--;
                Table 16, after "IM452" insert --(SEQ ID NO: 2606)--;
                Table 16, after "IM451" insert --(SEQ ID NO: 2607)--;
                Table 16, after "IM459" insert -- (SEQ ID NO: 2608)--;
                Table 16, after "IM458" insert -- (SEQ ID NO: 2609)--;
                Table 16, after "IM449" insert --(SEQ ID NO: 2610)--;
                Table 16, after "IM450" insert -- (SEQ ID NO: 2611)--.
Page 126,
                Table 17, after "(~J229)" insert --(SEQ ID NO: 1870)--;
                Table 17 after "(~J227)" insert --(SEQ ID NO: 1964)--;
                Table 17 after "(~J228)" insert --(SEQ ID NO: 1869)--;
                Table 17 after "(~ILPI)" insert --(SEQ ID NO: 2612)--.
Page 127,
                line 20, after "Monomer" insert -- (SEQ ID NO: 2115)--.
```